



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/092,730	03/08/2002	Steven J. Catani	15117.0090	7337

23767 7590 11/20/2003

PRESTON GATES ELLIS & ROUVELAS MEEDS LLP
1735 NEW YORK AVENUE, NW, SUITE 500
WASHINGTON, DC 20006

EXAMINER

KRISHNAN, GANAPATHY

ART UNIT	PAPER NUMBER
----------	--------------

1623

DATE MAILED: 11/20/2003

10

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/092,730

Applicant(s)

CATANI ET AL.

Examiner

Ganapathy Krishnan

Art Unit

1623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39, 46-49 and 60-74 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 22-34, 46-49, 60, 61 and 71-74 is/are allowed.
- 6) ☒ Claim(s) 1-20, 35-39, 62-65 and 67-70 is/are rejected.
- 7) ☒ Claim(s) 21 and 66 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 9. 6) ☐ Other: _____

Art Unit: 1623

DETAILED ACTION

The Amendment A (paper # 8) filed August 11, 2003 has been received, entered into the record and carefully considered. The following information provided in the amendment affects the instant application:

1. Claims 40-45, 50-59 and 75-86 have been cancelled.
2. Claims 14-17, 22-24, 36-39 and 60 have been amended.
3. Remarks/Arguments drawn to rejections under U.S.C. 112.

Claims 1-39, 46-49 and 60-74 are pending.

Claim Rejections - 35 USC § 112

The rejections of claims 14-17, 22-28, 36-39 have been overcome by amendments to these claims.

Joint Inventors

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Art Unit: 1623

The allowability of claims 13, 20, 62-65 and 67-70 indicated in the previous office action has been withdrawn and the following art rejections are made of record.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-20, 35-39, 62-65 and 67-70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Navia et al (US 5498709).

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-20, 35-39, 62-65 and 67-70 are drawn to method of purifying sucralose comprising subjecting a feedstock comprising crude sucralose solution to a non-crystallization purification step to obtain increased purity sucralose solution; performing crystallization to obtain crystalline sucralose, recycling at least a portion of the mother liquor to the said feedstock and performing at least three additional crystallizations to obtain a further purified sucralose; wherein the additional recrystallizations are performed 3-5 to times and more than five times; wherein in a dependent claim the mother liquor

Art Unit: 1623

from any crystallization step is recycled to an earlier crystallization stage; wherein the method is performed as a batch operation; wherein the non-crystallization step is selected from liquid-liquid extraction, extractive precipitation, chromatography and precipitation followed by solvent washing.

Navia et al's invention is drawn to production of sucralose. Navia et al teach steam stripping of crude sucralose solution followed by extraction with an appropriate solvent (non-crystallization purification steps) and then crystallization of the increased purity sucralose to obtain a more pure crystalline sucralose. The mother liquors may be used for recycle to obtain additional material (see col. 10, lines 9-31). Navia et al also teach that once crude sucralose has been recovered the product can be purified by crystallization and recrystallization until the desired purity level is reached (see col. 6, line 64 through col. 7, line 4).

The difference seen between Navia's process and the instant invention is that the instant invention uses 3-5 or more than five recrystallization steps to purify sucralose whereas Navia et al disclose that recrystallization can be performed till desired level of purity is reached.

Based on this disclosure of Navia et al and the fact that crystallization of sucralose is relatively easier (col. 2, lines 42-43) it would have been obvious to one of ordinary skill in the art at the time the invention was made to use sequential recrystallization steps to purify sucralose since it is an ideal art tested method of increasing the purity level of sucralose.

Conclusion

1. Claims 1-20, 35-39, 62-65 and 67-70 are rejected.

Allowable Subject Matter

2. Claims 22-34, 46-49, 60-61 and 71-74 are unobvious over the prior art of record and are found to be allowable. The instant claims are drawn to method of obtaining sucralose from a feed mixture comprising sucralose and chlorinated derivatives and compositions comprising sucralose of over 99.8% purity. The prior art of record teaches method of purifying sucralose from a feed mixture comprising sucralose and chlorinated derivatives and conversion of the crude ester to sucralose without the preliminary purification of the 6-O-acyl trichloro-trideoxy galactosucrose and sucralose of 95-97% purity. The compositions as instantly claimed and the preliminary purification of the 6-O-acyl trichloro-trideoxy sucralose and conversion to sucralose are neither taught nor obvious over the prior art.

3. Claims 21 and 66 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ganapathy Krishnan whose telephone number is 703-305-4837. The examiner can normally be reached on 8.30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James O. Wilson can be reached on 703-308-4624. The fax phone number for the organization where this application or proceeding is assigned is 703-305-3014.


Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1235.

Application/Control Number: 10/092,730

Page 6

Art Unit: 1623

GK


SAMUEL BARTS
PRIMARY EXAMINER
GROUP 1200